OBJECTIVES: To assess the clinical and economic burden of gastroesophageal reflux disease (GERD) in the U.S. veteran population. **METHODS:** Patients diagnosed with GERD (International Classification of Diseases, Ninth Revision, Clinical Modification [ICD-9-CM] codes: 309.81, 530.1, 530.10-530.12, 530.81, 787.1) were included in a retrospective study (1/1/2006-5/31/2012) conducted using the Veterans Health Administration (VHA) Medical SAS Datasets. Continuous medical and pharmacy benefits were required 12-month pre- and 12-month post-index date (initial GERD diagnosis date). Comorbidities were examined for the 12 months baseline period; medication and treatment were examined during the 60-day follow-up period. Health care resource utilization and costs were assessed for the 12-month follow-up period. Descriptive statistics were calculated as means±standard deviation (SD) and percentages to measure treatment, cost, and utilization distribution in the sample. **RESULTS:** A total of 1,123,133 GERD patients were identified in the database. During the 12-month baseline period, the most common comorbidities were unspecified essential hypertension (23.92%), diabetes (13.70%) and hyperlipidemia (8.36%). During the 60 days post-index date, the most commonly prescribed medications were omeprazole (39.87%), simvastatin (27.52%), lisinopril (19.11%), ranitidine hydrochloride (12.48%), and hydrochlorothiazide (10.30%). During the 12-month follow-up period, percentages of inpatient (16.40%), emergency room (ER) (20.66%), physician office (99.83%), and outpatient visits (99.86%) were also calculated. Patient expenditures were found to be $5,498 (SD=$32,411) for inpatient, $246 (SD=$899) for ER, $6,724 (SD=$10,694) for physician office and $7,201 (SD=$11,407) for outpatient visits. **CONCLUSIONS:** Results suggest that omeprazole is the most frequently prescribed medication after a GERD diagnosis. GERD was associated with a high inpatient admission and ER visit rates, which translated into a significant cost burden for the health care system.

PGI9

ECONOMIC BURDEN OF CHRONIC CONSTIPATION AMONG PATIENTS IN A COMMERCIALLY INSURED POPULATION: A RETROSPECTIVE ANALYSIS OF ALL-CAUSE COSTS

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OBJECTIVES: To evaluate total annual all-cause costs of chronic constipation (CC) among patients with different health plan benefit designs and assess incremental costs of CC in a commercially insured population. **METHODS:** Patients were identified from the HealthCore Integrated Research Database as follows: (1) age ≥18 years as of January 1, 2010; (2) continuous eligibility in 2010; (3) ≥2 constipation diagnoses (ICD-9-CM: 564.0x) occurring ≥90 days apart or ≥1 constipation diagnosis plus ≥1 constipation-related prescription occurring ≥90 days apart. A control group without irritable bowel syndrome, constipation, abdominal pain, or bloating was randomly selected using 1:1 matching on basic demographic characteristics. Patients were categorized by health plan benefit design into non-capitated health maintenance organizations (HMO), preferred provider organizations (PPO), Medicare Advantage (MA), and other benefit designs. Total all-cause health care costs included pharmacy costs and costs from medical services. Generalized linear models were used to evaluate the incremental costs attributable to CC. **RESULTS:** Of 14,854 CC patients and controls identified, 71.7% had PPO, 12.0% had non-capitated HMO, 10.2% had MA, and 6.1% had other benefit designs. Mean age (±SD) was 58.7 (±20.4) years; 75.4% were female. Overall, CC patients had $8,713 ($P<0.001$) higher unadjusted total annual all-cause health care costs versus matched controls; costs were $9,736 ($P<0.001$) higher for non-capitated HMO, $8,029 ($P<0.001$) for PPO, and $11,813 ($P<0.001$) for MA. Medical costs were the primary driver of unadjusted all-cause costs regardless of benefit design (82%-84% of total costs). This finding remained consistent in the overall study population even after adjusting for demographics and comorbidities. Total incremental all-cause costs associated with CC were $3,508 ($P<0.001$), with 81% for medical services. **CONCLUSIONS:** The economic burden of CC is substantial in a US commercially insured population. A consistent burden was seen across different health plan benefit designs, with costs driven by the use of medical services.

PGI10

ECONOMIC BURDEN ASSOCIATED WITH ULCERATIVE COLITIS IN CANADA: AN ANALYSIS USING THE RAMQ DATABASE

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OBJECTIVES: Ulcerative colitis (UC) is an inflammatory bowel disease (IBD) that results from chronic inflammation restricted to all or part of the colon and begins in the rectum. UC significantly impact quality of life and accounts for substantial costs to the health care system and society. The objective of this study was to describe and estimate health care resource utilization in the treatment of UC from a health care system perspective. **METHODS:** A retrospective study of the Quebec provincial drug reimbursement program (RAMQ) was conducted using a randomly selected group of patients who received at least one diagnosis of UC (ICD-9=556.x) between January 1st, 2010 and December 31st, 2011, but who did not received a diagnosis of Crohn's disease (ICD-9=555.x). A control group of patients without any diagnosis of UC was created on a 1:1 ratio and matched for age and gender. The difference between the costs of resources consumed during the 2year study period by the two groups (using t-test) provided an estimate of the incremental cost associated with the management of UC. **RESULTS:** A total of 2,975 patients with UC were included in the study (mean age=55.5 years, 52% females). During the 2-year study period, patients had received a total of 57,264 scripts for anti-inflammatory drugs, immunosuppressors and/or anti-TNFα agents. The total cost of medical procedures, medications and hospitalizations were higher for UC patients, with an annual incremental cost per patient of CAN$370 (95%CI: 331-410), CAN$2,374 (95%CI: 2135-2613) and CAN$2,795 (95%CI: 2399-3192), respectively. The annual difference in direct costs between UC patients and controls was estimated at CAN$5,539 (95%CI: 5,036-6,043) per patient. **CONCLUSIONS:** The present analysis illustrates the high cost of treatments, the high frequency of hospitalizations resulting in increased hospitalization costs and the substantial economic burden, in terms of direct medical costs associated with UC.

PGI11

COST AND UTILIZATION TRENDS OF ANTIEMETIC DRUG IN US USING MEDICAID DATABASE, 1991-2011

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OBJECTIVES: Antiemetic is a drug that is effective against vomiting and nausea. The objective of this study is to calculate price trends for individual antiemetic and to describe the trends of utilization and spending on antiemetic drugs in the U.S. Medicaid program. **METHODS:** A retrospective descriptive analysis was performed using data from the Medicaid database from 1991 through second quarter 2011. We extracted the utilization and expenditure data from the national Medicaid pharmacy files collected by the Centers for Medicare & Medicaid Services. Study drugs include antihistamines (cyclizine, dimenhydrinate, buclizine), steroids (dexamethasone, methylprednisolone), dopamine antagonists (droperidol, ondansetron, granisetron, palonosetron). Total prescriptions reimbursed by Medicaid and total reimbursement cost were calculated by adding the data for each antiemetic identified by its NDC. The Annual totals of reimbursement per-prescription were calculated as annual total reimbursement divided by Annual total number of prescriptions. **RESULTS:** The total number of prescriptions which paid by Medicaid was increased from $339,822 in 1991 to $1.0 million in second quarter of 2011. The data shows 80% decrease in antiemetic utilization in 1999. The drug Ondansetron has increasing trends after 2006 up to about 70% in the first quarter of 2011. The price was in increasing rate until 2011. About 100% increase in the price of generic Zofran. The average of reimbursement per prescription has increased from $15.22 in 1991 to $36.90 in 2011. **CONCLUSIONS:** In the light of this study, more studies are needed to create antiemetic guidelines that would help to improve efficacy, increase the patients compliance, and decrease the antiemetic costs.

PGI12

COST-EFFECTIVENESS OF LINACLOTIDE FOR THE TREATMENT OF ADULT PATIENTS IN THE US WITH IRRITABLE BOWEL SYNDROME WITH CONSTIPATION

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OBJECTIVES: To evaluate the cost-effectiveness of linaclotide 290 mcg once daily versus lubiprostone 8 mcg twice daily in the treatment of adult patients with irritable bowel syndrome with constipation (IBS-C) **METHODS:** Using model inputs derived from published literature, linaclotide Phase III trial data, and a physician survey on resource utilization associated with treatment failure, a decision-tree model was constructed to estimate outcomes and costs of treatment for IBS-C. Response to therapy was defined as (1) a ≥14-point increase from baseline in IBS-QOL overall score at Week 12 or (2) one of the top two responses (moderately/significantly relieved) on a seven-point IBS symptom relief question in ≥2 of 3 months. Patients who do not respond to therapy are assumed to fail therapy and accrue costs associated with a treatment failure. Model time horizon is aligned with clinical trial duration at 12 weeks. Model outputs include number of responders, quality-adjusted life-years (QALYs), total costs (including direct and indirect), and incremental cost-effectiveness ratios (ICERs). Both one-way and probabilistic sensitivity analyses were conducted. **RESULTS:** Treatment for IBS-C with linaclotide produced more responders than lubiprostone for both response definitions (19.3% vs. 13.0% and 61.6% vs. 57.2% for IBS-QOL and symptom relief, respectively), lower per-patient costs ($780 vs. $870 and $1,014 vs. $1,088), and higher QALYs (0.1924 vs. 0.1917 and 0.1909 vs. 0.1894, over the 12-week time horizon). Therefore, linaclotide was dominant (more effective and less expensive) compared to lubiprostone. Results were similar to base-case for most one-way sensitivity analyses. The majority of 1,000 second order Monte Carlo simulations resulted in linaclotide dominant ICERs for both definitions of treatment response. **CONCLUSIONS:** Linaclotide was found to be cost-effective versus lubiprostone for treatment of adult patients with IBS-C.

PGI13

COST-EFFECTIVENESS OF INFLIXIMAB VERSUS COLECTOMY FOR THE TREATMENT OF SEVERE ACTIVE ULCERATIVE COLITIS IN POLAND

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OBJECTIVES: To assess the cost-effectiveness of infliximab as induction therapy (3 doses) for the treatment of severe active ulcerative colitis, i.e. exacerbations requiring hospitalization in adult patients with an inadequate response to conventional therapy including intravenous glucocorticoids, compared with surgery (colectomy) in Poland. **METHODS:** This study used the decision tree model which was positively received by NICE and adjusted to Polish settings.